Chemical & Biological Detectors
NEWSLETTER

NAVSEA WARFARE CENTERS
CRANE

Volume 2 OCT 2005

PMS NOTE

We are continuing to update Detector PMS as we get your inputs from the fleet. New MIPS were assigned to the following in January 2005:

6641/051 AN/KAS-1/1A
6641/052 IPDS

These changes were put into effect because we had numerous rates involved with Maintenance and Operation. IE... IC/ET/GSE/DC ratings doing the maintenance while the DC rating has been responsible for the operation. This change is documented and approved by OPNAV N76 in Navy System Training Plans (NTSP) N76-NTSP-X-80-0408 and N76-NTSP-X-80-409. Some ships have put in FBR's to change the new MIP back to IC/ET's. We highly encourage you not to do this. These rates do not receive any training on the equipment and have not been maintaining it. During INSURV and ATG assessments the DC score under CBR has shown this to be true. A DC advisory is being released to give further direction on this change. DFU PMS should hit the fleet next on the next Force Revision

6641/053 Shipboard ACADA will be deleted in upcoming FR1-06. See ISEA comments, page 2.

For CBR-D Training feel free to contact:

CBR Detectors - Jeff Smith at *(757) 443-3872 ext 1157, Cell (757) 376-2686, Jeffery.e.smith.ctr@navy.mil*

CPS - Chuck Lansing at (757)-492-6340, charles.lansing@navy.mil

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Detectors Acquisition Engineering Agent

Training, Training, Training

Train-the-Trainer 2005 kicked off in Norfolk, Virginia on January 13 in San Diego, California on 7 February 2005 in Yokosuka & Sasebo Japan on 18 April 2005 in Hawaii on 12 July and Mayport FL on the 23rd of August 2005. The two-day informational session covered a variety of CBR gear including CPS, IPE, IPDS, AN-KAS-1A, DFU/HHA, Shipboard ACADA, Multi Function Radiac, and the ANPDR-65 radiac. Additionally, discussions on current CBR document updates, CBR website development, and the CBR support network were held. Over 100 personnel from 45 different commands participated making this a very successful training tool. This training evolution was conducted by a teaming effort between NSWC Crane, NSWC Dahlgren, NSWC Carderock Division Philadelphia, and SPAWAR. **THANKS TO ALL COMMANDS WHO TOOK PART**.

CBR WEBSITE:
The CBR website is now available for viewing for all personnel (https://cbrd.navy.mil). All training material can be located for detectors along with the technical manuals, instructor guides, etc.… First time uses will have request an account registration; make sure you click on the appropriate link for registration.

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IMPROVED (CHEMICAL AGENT) POINT DETECTION SYSTEM (IPDS) ISEA COMMENTS

Our primary mission is to support the fleet. If you have any problems with the Improved Point Detection System, you can contact us via email or phone and speak directly with one of our experienced technicians. Many times problems are solved via the phone without the need for requisitioning any replacement parts or subsystems.

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SHIPBOARD ACADA ISEA COMMENTS

NSWC's Crane and Dahlgren, as part of a Joint Service team, have completed analysis of the shipboard ACADA. Performance issues have been identified. These issues indicate the Shipboard ACADA performance does not meet the fleet requirements for Chemical Warfare Agent Detection. NSWC CRANE message DTG R 031509Z OCT 05 directs all ships to return Shipboard ACADA's to NSWC Crane. NSWC Crane & NSWC Dahlgren will continue to pursue an interim material solution until the Joint Chemical Agent Detector is fielded.

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AN/KAS-1/1A (CWDD) ISEA COMMENTS

The grounding strap requirement for the AN/KAS Power Conversion Unit (PCU) is a Class C, Type II bond. In the past it was listed as a Type III bond, which is not approved for topside (weather deck) installation.

Ship allowance for the CWDD can be found on AEL 2-770004241 and AEL 2-770004251.

Running the AN/KAS-1/1A Sensor Unit (SU) frequently can help increase the reliability and reduce premature SU failure. PMS requires running SU at least 30 minutes every 2 months. However, running the SU at least 1 hour per week will increase reliability.

Are your ship's benchmark data plates filled out at each AN/KAS mounting location?

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- We are currently evaluating hardware changes which could significantly reduce purge times. If a unit is in PURGE, it has sensed a contaminate with a concentration high enough to saturate the IMS cells. If saturation occurs and the purge cycle is started, the following message will be shown on both the RDU and CDU: PORT/STBD DETECTOR PURGING SAMPLE. If the system remains in PURGE greater than 8 hours, check the immediate area for any vapor producing activities (i.e., painting, waxing, cleaning with chemicals). After 36 hours, if the system is still in PURGE, replace the desiccant filter.

- Due to the sensitivity of the system to small amounts of sample vapors, all maintenance on Detection Units (DUs) and External Air Sampling Units (EASUs) should be performed when there are no vapor producing activities ongoing on interior of ship (i.e. painting, cleaning with chemicals, floor waxing, weapons firing, etc.). The introduction of any contaminant may have a significant effect on the ability of the system to detect chemical agent vapors. The contamination may cause the system to false alarm, report errors, incorrectly identify a chemical agent vapor sample, or not alarm at all if chemical agent vapors are present.

- IPDS Technical Manual S9437-A8-MMM-010 update to Revision 2 is being distributed to the fleet. If you have not received one, feel free to drop me a line and I will forward a copy via e-mail.

Which way is your EASU installed?

WRONG!!!
But a great way to catch water and destroy your system.

RIGHT!!!
Properly installed External Air Sampling Unit will minimize water intrusion.

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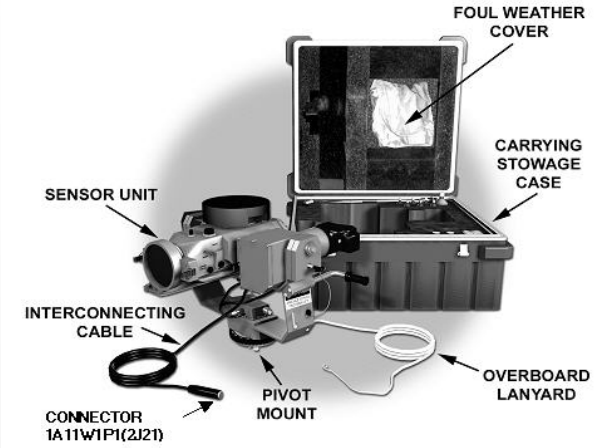
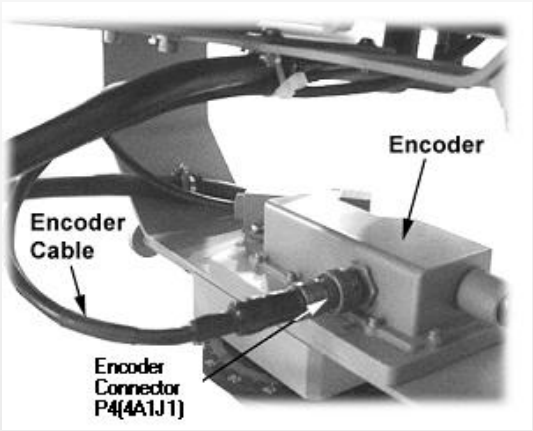
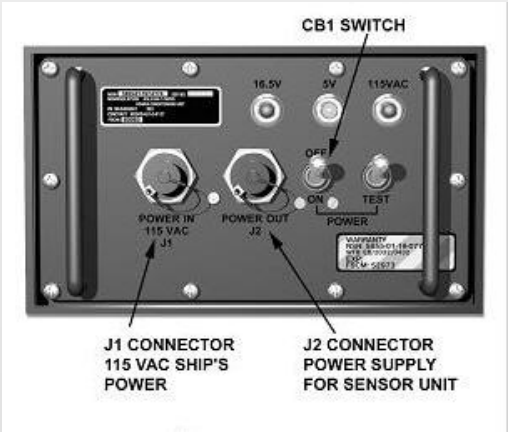
The following pictures provide clarification of connector locations on SU and PCU for application of silicone compound per MRC GEFD on MIP 6641/051.







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The Navy's Radioactive Material Permit (NRMP) requires the radiological sources in the Detection Units (DUs) to be tracked semi-annually throughout the life cycle of the system. NSWC Crane will send an e-mail message to IPDS users every 6-months requesting a Serial Number verification of the equipment. When this occurs, you must visually verify the Serial Number on both DUs and reply back to Crane. Serial Numbers run from 1000 thru 1500.

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1. Do you know where these are installed?

2. Do you know when and how to replace them?

3. Do you know why they are important to you?

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JOINT BIOLOGICAL POINT DETECTION SYSTEM (JBPDS) ISEA COMMENTS

The Joint Biological Point Detection System (JBPDS) is intended to rapidly and automatically detect the presence of airborne Agents of Biological Origin (ABO), and to identify the agent at the point where the system is deployed. As a point sensor, the JBPDS will be used as part of an evolving joint biological detection and warning network comprised of remote, early warning, point, and monitoring elements. Each JBPDS system configuration consists of four functional areas: Detection, sample collection, identification, and warning. The detection function will continuously monitor the environmental background for changes consistent with a high probability of BW attack. The sample collection function will collect, concentrate, and preserve a sample for analysis. The system operates by continuously monitoring outside air via one of the air inlet stacks and the BBSU. If a bio threat is detected, a sample is collected from the 2nd inlet stack, and the air particles are trapped with water to result in a liquid sample. The liquid sample is then inoculated onto a series of immunoassay strips containing bio threat antigens, and the resultant positive/no-positive indications are automatically read via electro-optics. If there is a positive result, the system will activate the ships chemical alarm, and indicate the specific agent identified.

Currently the system is installed on the USS The Sullivans and Dwight D. Eisenhower. In FY 06 the following commands are scheduled to be outfitted with the system:

DDG-51	LHA-1	LSD-47
DDG-63	LHA-4	LSD-48
DDG-76	LSD-41	LSD-52
DDG-81	LSD-44	CVN-68.

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DRY FILTER UNIT (DFU) ISEA COMMENTS

The DFU is currently 95% fielded throughout the Surface Fleet. If your command does not have DFU, or if your not sure if you were outfitted, feel free to contact myself, or Jeff Smith jeffery.e.smith.ctr@navy.mil and we will verify if you were outfitted or get you the equipment and provide training if needed.

If you have expired HHA's they must be destroyed by soaking them in a 5% HTH solution for 30 minutes then disposed of as medical waste.

PMS has been developed and will be issued in the next Force Release.

The technical manual (TM), which will be a Joint Service TM with the Army, Marine Corp and Air Force, should be ready for issue December 05. For a copy of the rough draft manual contact Jeff Smith or myself.

Part of the initial issue for the DFU is the Biological Response Kit (BRK) (formerly the Bio Response Bag). AEL 2-770004354, along with NSTM 470 Table 470-4-3, will provide a list what shall be kept in the kit.

BRK Items

Conical Tube

The conical tube used to collect samples for testing with HHA must contain at least 7.5 mL of Phosphate Buffer Solution (PBS) to successfully complete HHA analysis. If tube does not contain at least 7.5 mL PBS, obtain a second conical tube from another DFU kit, open it, and pour enough PBS into the original conical tube to reach a level of 7.5 mL or greater.

ISEA has submitted changes to AEL 2-770004241 and AEL 2-770004251 for CBR-D DETECTION EQUIPMENT to add ships allowances for DFU, DFU Sampling Kit, Operational HHA, Refrigerator for storage of HHA, Training HHA and Biological Response Kit. Revised AEL's should be complete by end of October 2005.

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